

Customer No.: 31561
Docket No.: 12190-US-PA
Application No.: 10/708,015

AMENDMENT

To the Claims:

Please amend the claims as follows:

Claims 1-2 (cancelled)

~~Claim 3 (currently amended) The automatic contrast limiting circuit with a spatial domain infinite impulse response filter of claim 1, An automatic contrast limiting circuit with a spatial domain infinite impulse response filter, for evaluating a contrast value, comprising:~~

a spatial domain infinite impulse response filter, for receiving an input signal for generating a spatial domain infinite impulse response filtering value;

a peak value detector, coupled to the spatial domain infinite impulse response filter, for generating a peak value during a predetermined recording interval corresponding to the spatial domain infinite impulse response filtering value; and

a contrast evaluator, coupled to the peak value detector, for evaluating the contrast value according to the peak value and a predetermined threshold,

wherein when the contrast evaluator determines the peak value higher than the predetermined threshold, the contrast value is 1; otherwise, the contrast value is a value of the predetermined threshold divided by the peak value.

~~Claim 4 (currently amended) The automatic contrast limiting circuit with a spatial domain infinite impulse response filter of claim 1 further comprising: An automatic contrast limiting circuit with a spatial domain infinite impulse response filter, for evaluating a contrast value, comprising:~~

Customer No.: 31561
Docket No.: 12190-US-PA
Application No.: 10/708,015

a spatial domain infinite impulse response filter, for receiving an input signal for generating a spatial domain infinite impulse response filtering value;

a peak value detector, coupled to the spatial domain infinite impulse response filter, for generating a peak value during a predetermined recording interval corresponding to the spatial domain infinite impulse response filtering value;

a contrast evaluator, coupled to the peak value detector, for evaluating the contrast value according to the peak value and a predetermined threshold,

a front-end spatial domain infinite impulse response filter, for receiving a front-end input signal for generating a front-end spatial domain infinite impulse response filtering value; and

a front-end peak value detector, coupled to the front-end spatial domain infinite impulse response filter for generating a front-end peak value during a front-end predetermined recording interval to be the input signal of the spatial domain infinite impulse response filter according to the spatial domain infinite impulse response filtering value.

Claim 5 (currently amended) The automatic contrast limiting circuit with a spatial domain infinite impulse response filter of claim 4. An automatic contrast limiting circuit with a spatial domain infinite impulse response filter, for evaluating a contrast value, comprising:

a spatial domain infinite impulse response filter, for receiving an input signal for generating a spatial domain infinite impulse response filtering value;

Customer No.: 31561
Docket No.: 12190-US-PA
Application No.: 10/708,015

a peak value detector, coupled to the spatial domain infinite impulse response filter, for generating a peak value during a predetermined recording interval corresponding to the spatial domain infinite impulse response filtering value;

a contrast evaluator, coupled to the peak value detector, for evaluating the contrast value according to the peak value and a predetermined threshold,

a front-end spatial domain infinite impulse response filter, for receiving a front-end input signal for generating a front-end spatial domain infinite impulse response filtering value; and

a front-end peak value detector, coupled to the front-end spatial domain infinite impulse response filter for generating a front-end peak value during a front-end predetermined recording interval to be the input signal of the spatial domain infinite impulse response filter according to the spatial domain infinite impulse response filtering value,

wherein the front-end spatial domain infinite impulse response filter comprises:

a first multiplier, for multiplying the front-end input signal with a first factor value for generating a first output value;

an adder, coupled to the first multiplier for generating a sum of the first output value and a second output value to be the front-end spatial domain infinite impulse response filtering value; and

a second multiplier, for multiplying the front-end spatial domain infinite impulse response filtering value with a second factor value for generating the second output value, wherein a sum of the first factor value and the second factor value is 1.

Claim 6 (cancelled)

Customer No.: 31561
Docket No.: 12190-US-PA
Application No.: 10/708,015

Claim 7 (currently amended) The ~~automatic contrast controlling method of a spatial domain infinite impulse response filter of claim 6~~; An automatic contrast controlling method of a spatial domain infinite impulse response filter, adapted to evaluate a contrast value, comprising:

receiving an input signal for generating a spatial domain infinite impulse response filtering value;

generating a peak value during a recoding interval according to the spatial domain infinite impulse response filtering value; and

evaluating the contrast value according to the peak value and a predetermined threshold,

wherein when the peak value is higher than the predetermined threshold, the contrast value is 1; otherwise, the contrast value is a value of the predetermined threshold divided by the peak value.